

What is claimed is:

1. A surgical microscope comprising:
  - a viewing unit for viewing an object;
  - an image projection module for inputting image data into said viewing unit;
  - 5       said image projection module including an image display unit for displaying said image data; and,
  - said image projection module including a plano-convex lens and a plano-concave lens mounted downstream of said image display unit.
2. The surgical microscope of claim 1, wherein said plano-convex lens has a first focal length and said plano-concave lens has a second focal length; and, the ratio of said first focal length and said second focal length lies within a range from 1.9 to 2.5.
3. The surgical microscope of claim 1, wherein said viewing unit defines a viewing beam path; and, said image projection module includes a beam splitter mounted in said viewing beam path.
4. The surgical microscope of claim 3, wherein said plano-convex lens is a first plano-convex lens; said image projection unit further including a concave-convex lens and a second plano-convex lens; said first plano-convex lens, said plano-concave lens, said  
5       concave-convex lens and said second plano-convex lens all being arranged between said image display unit and said beam splitter.
5. A surgical microscope comprising:
  - a viewing unit for viewing an object and said viewing unit

defining a viewing beam path:

an image projection module for inputting image data into  
5 said viewing unit;

said image projection module including an image display unit  
for displaying said image data;

an image recording module for recording an image of said  
object supplied by said viewing unit; and,

10 said image recording module including:

an image sensor mounted to receive said image data from said  
image projection module;

an image recording beam splitter mounted in said viewing  
beam path for directing said image of the object onto said image  
15 sensor; and,

a recording device connected to said image sensor for  
recording said image data and said image of said object.

6. The surgical microscope of claim 5, wherein said image  
projection module is disposed in said viewing beam path between  
said image recording beam splitter and said object.

7. The surgical microscope of claim 5, wherein said recording  
device includes an image mixer for mixing image data and said  
image of said object.

8. A surgical microscope comprising:

a viewing unit for viewing an object and said viewing unit  
defining a viewing beam path:

an image projection module for inputting image data into  
5 said viewing unit;

said image projection module including an image display unit

for displaying said image data;

said image display unit including a reflection display  
illuminated sequentially with different colors as a function of  
time.

9. The surgical microscope of claim 8, wherein said image  
display unit includes a rotatably mounted filter wheel for  
illuminating said reflection display; and, a device for  
synchronizing the rotation of said filter wheel with the clock  
ratio of said reflection display.

10. The surgical microscope of claim 10, wherein the brightness  
of said image display unit is increased by providing a  
time-dependent sequential illumination of said reflection display  
with only a single color.

11. A surgical microscope comprising:

a viewing unit for viewing an object;

an image projection module for inputting image data into  
said viewing unit;

said image projection module including an image display unit  
for displaying said image data;

said viewing unit defining a viewing beam path;

an optical device mounted in said viewing beam path for  
providing an image of said object to a location outside of said  
viewing beam path;

an image recording module for recording an image of said  
object supplied by said viewing unit; and,

said image recording module including:

an image sensor mounted to receive said image data from said

15 image projection module;

an image recording beam splitter mounted outside of said viewing beam path for directing said image of the object onto said image sensor; and,

a recording device connected to said image sensor for  
20 recording said image data and said image of said object.

Patent for Sale